Society for Industrial Archeology · New England Chapters

VOLUME 36 NUMBER 1 2015

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Southern New England Chapter - SIA President's Report

Spring 2015

On March 7, 2015, nearly 60 people attended the *28th Annual New England Conference on Industrial Archeology* hosted by the SNEC-SIA in the Heckler Auditorium at Alden Laboratories in Holden, Massachusetts. Just three days prior, the location had to be changed due to circumstances beyond our control. Much thanks goes to Susan Ceccacci who was able to get us into Alden on short notice. Otherwise, the event went off "without a hitch," as they say. After a brutal February of record snowfall and frigid temperatures, I think most would agree that it was nice to have a snowless sunny Saturday for the conference. We had a full day of eight presentations, including: Susan Ceccacci with *"Industrial Worcester: An Overview of Its Manufacturing Past and Archaeological Present"*; Sara Wermiel with *"Introduction of the Rolled I-beam in the United States in the 1850s"*; Gilmore Cooke with *"Paul de Mars, Edwin Armstrong and the Yankee Network: a 1941 audio recording of FM radio pioneers broadcasting between Boston, Paxton, MA and Mount Washington, NH"*; Miles Shugar with *"From Horse to Electric Power at the Metropolitan Railroad Company Site: an Old Collection Provides a New Narrative of Technological Change"*; Alan Earls with *"Route 128 – A Network of Artifacts and Milestones"*; Wes Haynes and Renée Tribert with *"Making Places: An Inventory of Historic Industrial Sites in Connecticut and Pilot Grant Program for Underutilized Mills"*; and Allison Chisolm with *"The Power of Improvement in Worcester's Metals Industries, 1864-1911"*. I closed out the day as a first-time presenter with *"Shoe Buttons, Liberty Laces & Insulated Staples: 153 years of M.M. Rhodes & Sons Company, Taunton, Mass*."

As part of the membership renewal application for 2015 we included a section where people could indicate their delivery preferences for the newsletter and other correspondence. Of these, 23 people indicated they'd like to receive paper versions of both the newsletter and announcements. 29 people opted for all-electronic delivery of these items. Most of you,

66, indicated you'd like to continue to get a paper version of the newsletter and e-mail notifications otherwise. The 20 people who did not respond will also get this option, as it is the default. We also wanted to know how many of you were also national SIA members. However, only 80 people answered the question. Of those, 54 are SIA members. We currently have a total of 138 SNEC members.

I am continually amazed with the ever-increasing amount of useful information that has been made available on the internet. Aside from the well-known examples such as the Library of Congress, Google Books and Google Patents, we also have some excellent regional resources such as the Digital Commonwealth (www.digitalcommonwealth.org), which includes thousands of high-quality historical images from organizations throughout Massachusetts. One of my new favorites is the *Fisk Tire Company Collection* of the Chicopee Public Library. It is an amazing set of about 25 images showing how tires were made in the 1920s. Also on Digital Commonwealth is the *Proprietors of Locks and Canals Collection* from the Center for Lowell History, with over 500 amazing drawings, mostly of turbines, canals and machinery. Another great example is the State Library of Massachusetts collection of atlases on Flickr (www.flickr.com/photos/mastatelibrary/sets/), with many super high-resolution maps from the late 19th and early 20th centuries. These old maps can be particularly useful for research. I am sure there are many other examples of sites out there. Feel free to contact me if you know of any links which you think would be useful to others.

Marc N. Belanger
Taunton, Mass.
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Southern New England Chapter - SIA
Treasurer's Report for 2014

The SNEC had a balance in its treasury of $10,652.68 at the end of the 2014. This was $22.90 less than the amount at the start of the year. Over the year, SNEC received $1,803.35 in income, from dues mainly, as well as member contributions, fees for the Middlesex Canal tour, and bank interest. Expenses of $1,826.25 were, in order of importance, shipping the newsletter, tour expenses, publishing the newsletter, donations to tour host sites (New Britain Industrial Museum and Middlesex Canal Association), SNEC officer memberships in the national SIA, internet hosting, and copying and miscellaneous. Ordinarily publishing the newsletter would be the biggest annual expense, but this year, the cost of the fall newsletter was paid in early 2015.

Currently, SNEC has 138 members. We welcome four new members and greatly appreciate two members who renewed as Life Members.

Any member who would like to see the details of the annual statement or SNEC's bank statement should contact me at swermiel@verizon.net.

Sara E. Wermiel, SNEC Treasurer

Northern New England Chapter - SIA
President's Report
Spring 2015

Treasurer, Rick Coughlin, reports that we have $5461.09 in the bank account as of 4/8/2015. Also that 32 members have paid their dues but 32 others have not yet; plus we have 39 lifetime members.

New Member Drive

Our renewals are down, leaving us short of incoming funds again. Every organization needs a constant influx of new members just due to atrophy. The dues increase to $20 was not the only solution needed. Advertisements are expensive and they, like press releases about upcoming tours, have a short life. There must be more people around that would really like to join SIA, as we did, if they only knew about it.

Here's what we all can do as a team to attract new people *on an ongoing basi:* As mentioned in the last newsletter, we all have local historical societies around us and many of them have museums (however small); some also have web sites. We can all visit the ones near us and ask if we can place racks with our fliers in them. *People visiting historical museums must be interested in local history.* We can also put our fliers in local libraries, many of which already have their own brochure racks. We can also contact our local historical societies that have web sites and ask if we can put a link to www.nec-sia.org on their sites.

We have a whole box of NNEC fliers and we just bought 25 racks for this goal. Call or e-mail me and I'll send as many as you can place. David Dunning: 603-526-6939 or dunmark@tds.net . It's up to all of us to keep NNEC afloat; will you row with us? Thanks.

David Dunning
NNEC President
dunmark@tds.net
603-526-6939

ANNOUNCEMENT
NNEC-SIA Spring Tour
Saturday, June 20, 2015, Rain or Shine
Wilder, White River Junction & Quechee, Vermont

Directions to Wilder Dam: From the junction of I-89 and I-91 go north one exit to I-91N Ex-11 onto Rt. 5. Turn left and stop at Cumberland Farms if you just need coffee or right to Mobile if you need both coffee and a restroom. Then continue north for about 3/4 mile and turn right onto Depot St. After one block, follow around to the left and turn right over the wooden arch bridge and right again at Passumpsic Ave. (GPS) to the dam parking lot. Sign in with Rick Coughlin at the desk. Plan to arrive about 9:30 AM; the tour will kick off at promptly at 10:00.

Noon - 3:30 PM: Hotel Coolidge in White River Jubction, VT. See the New Hampshire built locomotive, eat a buffet lunch that will include salad, finger sandwiches, pickles & olives, chips, homemade soup, coffee/punch, cookies or brownies. (Cost is $16.00 including tax and tip. SIA will collect cash or checks made to "Hotel Coolidge" – no credit cards.) With lunch, enjoy speakers with picture presentations about Engine #494 and the Glory Days of the Railroads in this area. Other presentations will include the first Wilder dam and paper mill, the history of the Quechee bridge and the Dewey Woolen Mill that was there. Over 200 slides in all.

Directions: backtrack to Cumberland Farms, past the exit ramp and follow Rt.-5 south for about a mile. Go left at the light, onto Rt. 4 (not over the bridge) and then right over the next bridge (Bridge St.) then left onto Railroad Row. Park in the big area. See the locomotive and then look for the Coolidge Hotel.

At 3:30, we will drive 7 miles west on Rt. 4 to Quechee Gorge: As you drive out of the Railroad parking lot watch for Rt. 4 signs but don't cross the river. Just before the gorge, park in the gift shop/ice-cream area on the right and walk across the bridge and back on the other side. Then walk under the bridge to view it and then upstream to the dam where The Dewey Mill was on your own.
As a bonus, the annual Quechee hot air balloon festival will be going on that day.

Welcome to visiting Society of Manufacturing Engineers (SME) members. We hope you will consider joining with us.

Questions: 603-526-6939 or dunmark@tds.net

David Dunning

FM Global/Chepachet Village Middle Privilege Tour Summary

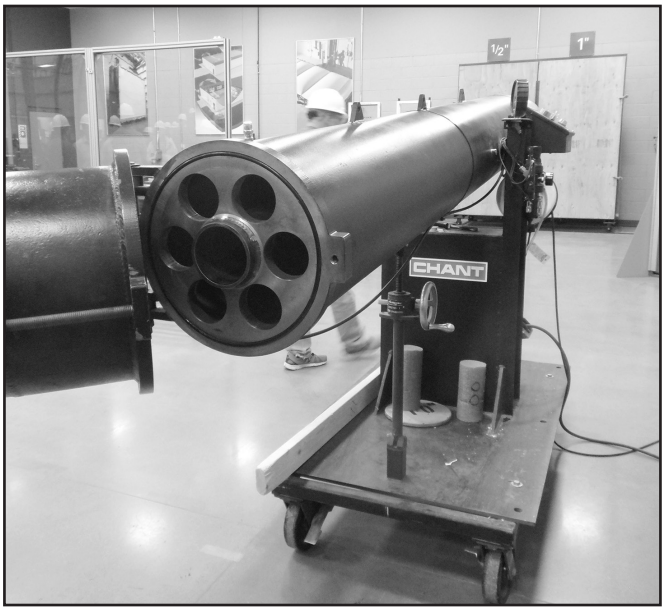
On April 15, 2015 a small group of SNEC members met in Chepachet, Rhode Island, for a tour of the FM Global Research Campus and the Chepachet Village Middle Privilege Archaeological Site. Chepachet village is part of the town of Gloucester. FM Global is one of the world's largest insurance companies and is the modern-day descendant of the "factory mutuals" (FM) that trace their origins back to 1835, when famed Rhode Island industrialist Zachariah Allen persuaded his fellow mill owners to form their own mutual fire insurance company, with a system of premiums based on the effectiveness of safety equipment, the adequacy of the apparatus and safer methods of factory construction. FM Global maintains a strong presence in New England, with its headquarters in Johnston, Rhode Island, and an engineering facility located in Norwood, Massachusetts. The FM Global Research Campus covers 1,600 acres in the western part of the town, near the Connecticut border. The company has occupied the site since 1967, but it wasn't until 2003 that the site was greatly expanded to what it is today. The research campus is said to be the only one of its kind in the world, with four main laboratories for fire technology, natural hazards, electrical hazards and hydraulics.

The day began with a complimentary breakfast in the facility's visitor center. We were part of a much larger group hosted by FM Global as part of their "visitor days" program. After welcoming remarks by company officials, and a short multi-media presentation, we were provided with hard hats and safety glasses and proceeded down several flights of stairs to the main floor of the large burn lab. The 33,600 square foot lab allows full-scale fire tests to be carried out on items such as tall racks of merchandise typically found in modern-day warehouses. The room contains two 80-ft x 80-ft movable ceilings that can be adjusted from 55-ft to 5-ft in height, with a variety of sprinkler head configurations to accurately simulate a client's facility. The large burn lab also contains a 35-ft diameter calorimeter which monitors the heat and smoke composition of the fire. We then proceeded to the safety of the glass-enclosed visitor gallery as a burn test was performed on a small stack of plastic pallets. Within just a few minutes the fire was nearly 60-ft high and its intense heat could be felt from behind the glass. The blaze was soon doused with two hose streams from the company's own firefighters wearing full protective equipment. All of the water used at the facility for testing is stored onsite within a 300,000 gallon tank, and is recirculated and treated in a closed-loop system. The smoke is also treated so that the only thing coming out of the stack is water vapor.

The tour then proceeded to the Natural Hazards Laboratory, where testing for windstorms, floods and earthquakes is done. The lab is used to evaluate a variety of products and construction methods for things such as roofing, windows and sheathing. We were treated to live demonstrations simu-

Tour participants head back into the FM Global visitor's center for lunch after witnessing a demonstrational dust explosion.

Testing tables within the Natural Hazards Laboratory for demonstrating the effects of wind uplift on membrane roofing.



A view of the breach of the compressed air cannon that is used to fire 2x4s into sheets of plywood, demonstrating the effects of wind-borne debris on wall materials. The 2x4 went right through the ½ inch plywood, while the 1-inch thick plywood safely repelled the lumber missile.

A view of the Chepachet River and the remnants of the raceway for the former White Woolen Mills in Chepachet, Rhode Island. The main mill burned in 1897 and was not rebuilt.

lating the effects of wind uplift on a membrane rubber roof, a 2x4 being shot out of a compressed-air cannon through a plywood wall to simulate debris in a windstorm, as well as a comparison test of two different types of shelving on the lab's earthquake shake table. The last demonstration test of the day was outside, where we were able to witness a small-scale dust explosion – behind the safety of a plexiglass shield.

After a complementary lunch provided by the company, a few of us headed a few miles down the road to the historic village of Chepachet for a brief tour of the Middle Privilege archeological site led by Erin Timms. Erin was part of a team of archeologists that worked on the site several years ago, ahead of work associated with the construction of a nearby stormwater detention pond by RIDOT and environmental remediation in the area of the former dye house. The site was developed in the late 18th century with a tannery and blacksmith shop. In the early 19th century, the mill privilege integrated a gristmill, distillery, sawmill, and cotton mill. The smaller mills were replaced with a larger brick and stone mill complex that operated a cotton mill under the name, F. R . White Co. Additions to the complex include worsteds production. In 1880, White died, leaving the mill complex to his brother, Henry C. White. In 1895, White employed Henry Merritt to redesign the mill, adding several large additions, that accommodated over 400 workers. However, in 1897, the mill complex burned and was never rebuilt. We were able to walk along the ruins of several foundations of the complex, adjacent to the tail race alongside the Chepachet River. Nearby, the former office and several tenement houses associated with the site still exist, as private residences. We were also able to see the nearby "upper mill" that is now occupied by an antique shop, and the ruins of the nearby boiler/engine house.

Marc N. Belanger
Taunton, Mass.

The Upper Mill of the White Woolen Mills in Chepachet, Rhode Island.

Clockmaker Chelsea Clock Co.

Clockmaker Chelsea Clock Co., which SNEC toured some years ago, is relocating from its historic building at 284 Everett Ave. in Chelsea, MA, to another old building in Chelsea. While it's fortunate that Chelsea Clock will remain in Chelsea, and apparently reuse an old loft building, the Everett Ave. building will be demolished. This is unfortunate; certainly some of the buildings on the Everett Ave. site could be rehabilitated and adapted to new uses.

You can read more about it here:
http://www.chelsearecord.com/2015/05/07/chelsea-clock-company-making-move-to-second-st-after-117-years-on-everett-ave/

Help Needed for Notable Loom Collection

The Little Red Shop Museum in Hopedale, Massachusetts, has announced that their collection of **seven antique power looms must be moved as soon as possible**, due to the loss of their storage arrangement. The museum is eager to find an appropriate and suitable new home for these looms that were once part of the Draper Corporation's museum collection of nine looms.

The seven looms available are as follows:
Loom #1: Atwood silk loom (1875) made in Stonington, Connecticut.
Loom #2: Kilburn and Lincoln (circa 1890) a high-speed (pre-automatic) loom built in Fall River, Mass.
#3: Draper "E" Model, which was built in 1901 and copied throughout the world.
#4: Draper Rebuilt "E" Model
#5: Draper High-Speed X-2, the most efficient and productive single shuttle cotton loom in the world.
#6: Draper "C" Model, a shuttle changer. Built in 1932.
#7: Draper High-Speed XD bobbin-changing loom, one of the finest rayon and synthetic single-shuttle looms.

Two other looms from the Draper collection are currently on display in the Little Red Shop Museum:
Draper "A" Model (circa 1894) developed by James Northrop and the Draper research staff in 1894.
Draper "K" Model (1918) the first loom adapted especially to weave the then new fiber, rayon.

More information (and photos) on the history of the collection and the Little Red Shop can be found here:
http://www.hope1842.com
http://littleredshopmuseum.org/

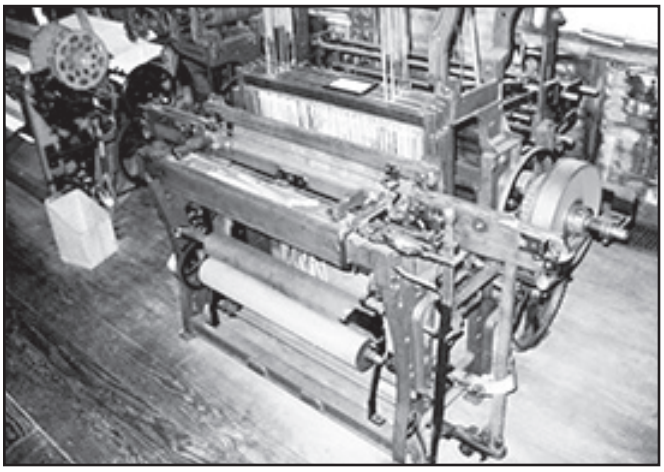
If you know of a museum, individual or organization that might be interested in any of these looms, please contact me as soon as possible. Thank you for any assistance you might have to offer.

Unfortunately, time is of the essence!

Sue Ciaramicoli
Volunteer Curator, Little Red Shop Museum
Hopedale, Massachusetts (508) 473-2192
sciaramicoli@comcast.net

Atwood Silk Loom (Left)

Kilburn & Lincoln Loom (Right)



Fall River, Warren & Providence Railroad, Slade's Ferry Bridge and the Fall River Grade Elimination Project

First opened in 1865 as the Fall River, Warren and Providence Railroad, the 19-mile line linking Providence, Rhode Island, and Fall River, Massachusetts, is notable for being the first "heavy" inter-urban steam main line in the United States to be electrified, as part of the New York, New Haven and Hartford Railroad in 1902, several years before the landmark electrification of its main line between New York and Connecticut in 1907. The Slade's Ferry Bridge was constructed by the Old Colony Railroad in 1875, to eliminate the need for a ferry crossing between Somerset and Fall River. At the time of its opening, the bridge was one of the longest tidewater spans in the United States. The double-deck wrought iron movable span carried roadway traffic on its lower deck and rail traffic on the upper deck. Originally a swing span, it was converted to a single-level bascule span in the 1938, after the bridge was destroyed by a ship collision in 1932. The Slade's Ferry Bridge continued to carry auto traffic between Fall River and Somerset until it was demolished in 1970. The 1900-1905 Grade Crossing Elimination Project in Fall River was carried out by the New Haven Railroad, to improve safety and traffic on local streets. It is one of the most ambitious engineering projects ever undertaken in the city, consisting of significant earthwork, large granite retaining walls, numerous steel bridges, and associated track work and property improvements.

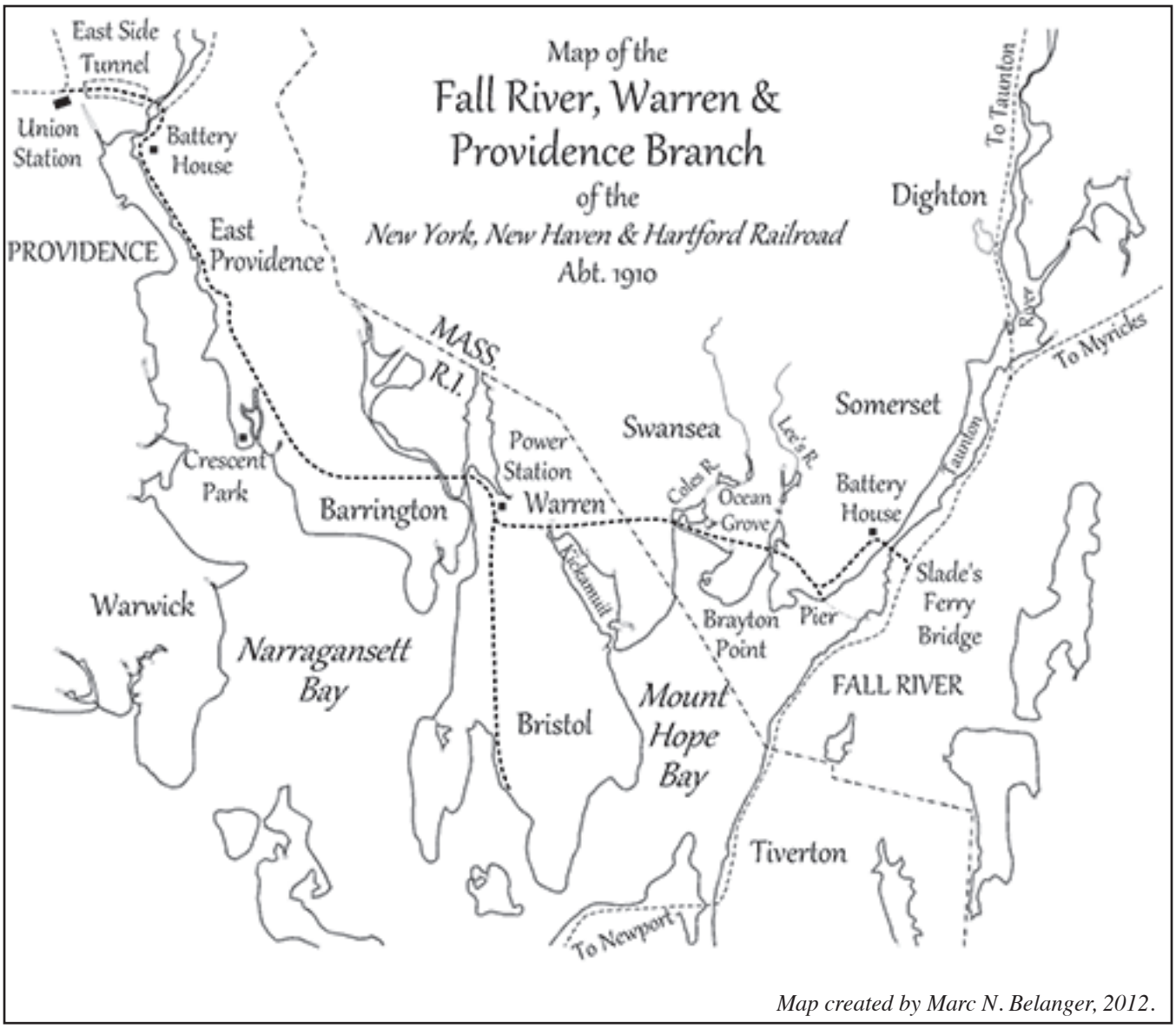
Fall River, Warren and Providence Railroad

The Fall River, Warren and Providence Railroad company was formed in 1862 with the combination of two 1856 railroads chartered in two states, to provide a rail link between Providence and Fall River - the Warren & Fall River Railroad over the portion within Rhode Island, and the Fall River & Warren Railroad within Massachusetts. The line opened for business on April 3, 1865. It consisted of a 6.5-mile single-track line between the Providence, Warren & Bristol Railroad line at Warren, Rhode Island, and Brayton Point in Somerset, Massachusetts, with water crossings over the Kickamuit, Coles and Lees River along the way. The connecting line from Providence to Bristol had opened in 1855. From Warren, the line included stops at Touisset, South Swansea and Brayton Point. Additional stations were later added at Ocean Grove and Brayton.

For the first ten years of its existence, Fall River-bound trains coming from India Point in Providence terminated at a ferry wharf located at Brayton Point in Somerset, on the western shore of Mount Hope Bay. Passengers then boarded the ferry Oriole for the short crossing to the company's wharf located at the foot of Ferry Street in Fall River, about two blocks from the city's main station, along what was then part of the Old Colony and Newport line. In 1873, the Old Colony Railroad began operating on the Fall River, Warren and Providence line, gaining full control on December 1, 1875, just prior to the opening of its newly finished bridge over the Taunton River from Somerset to Fall River, about 1.5-miles north of the ferry pier.

In 1892, Fall River's main station was relocated to North Main Street, with a new Richardsonian-style building designed by Bradford Gilbert. The Ferry Street station also remained in use for many years. The new "Fall River Station" included separate platforms for Boston and Providence-bound trains. These lines subsequently became part of the New York, New Haven and Hartford Railroad system in 1893, upon its lease of the entire Old Colony system. The terminus in Providence was moved from India Point to Union Station with the opening of the East Side Railroad Tunnel in 1908.

An early depiction of the Slade's Ferry Bridge across the Taunton River between Fall River and Somerset, Massachusetts. Rail traffic crossed on the upper deck, while vehicular and pedestrian traffic used the lower deck. This view shows how the roadway split on the Somerset side. A similar split occurred on the Fall River side, in the vicinity of Mechanics Mill. From Fall River and its Manufactories 1803-1894, *by Henry H. Earl, 1894.*

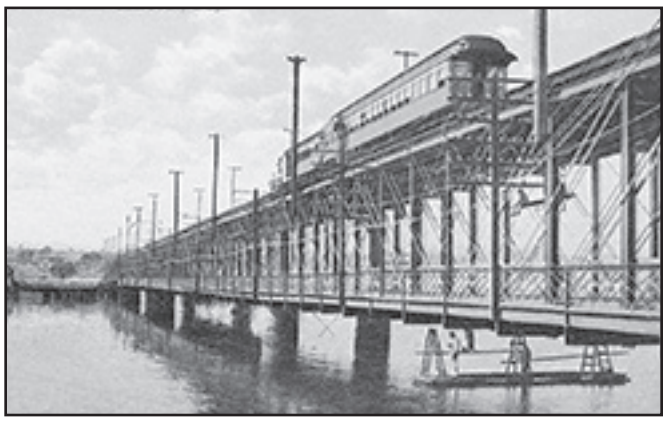


Map created by Marc N. Belanger, 2012.

Slade's Ferry Bridge

Named for a ferry crossing of the Taunton River which had been operated for many years by the Slade family, the 955-ft wrought iron truss bridge was constructed by the American Bridge Company of Chicago, under the direction of E.N. Winslow, chief engineer of the Old Colony Railroad, at a cost of $300,000. The bridge was 20-ft wide, with two decks, supported by five sets of piers set into the river bed, along with a central pier for the swing span, and a pair of stone abutments on each end to support the two decks. The center swing span, located closer to the Somerset side of the river, was 165-ft in length with a 60-ft wide water passage on each side. The approach spans were 158-ft each, with one on the Somerset side and four on the Fall River side. Additionally, one span over land on each end enabled the passage of street traffic onto the lower deck.

The eastern end of the bridge was located just north of the Mechanics Mill. Rail traffic from the upper deck passed to the north of the mill, on a curved spur track connecting to the Old Colony's double main line near what is now President Avenue, while vehicular traffic on the lower deck travelled to the south of the mill along Remington Avenue to Davol Street.



View of Slade's Ferry Bridge, after it was electrified in 1902.

In November 1875, a test run was made over the bridge, with a train carrying 300 tons of stone on the upper deck, and a team pulling 75 tons of pig iron on the lower deck. The bridge opened to regular rail traffic on December 13, 1875, and to road traffic a couple of weeks later.

In 1893, the same year as the New Haven takeover, the Globe Street Railway Company obtained permission to lay trolley tracks on the lower deck of the Slade's Ferry Bridge, for use by the Dighton, Somerset & Swansea Street Railway Company (with later trolley connections to Taunton and Providence).

On April 26, 1908, the bridge was dynamited by George E. Davis, a disgruntled union iron worker, causing damage to several spans. That same year, the New Haven announced plans to build a new, double-track bridge in place of the Slade's Ferry Bridge – a plan that never came to fruition.

Fall River Grade Crossing Elimination Project

Formal discussions to abolish all grade railroad grade crossings within Fall River began about 1895, between the city and the New Haven Railroad. The project moved forward in 1900 with approval by the Massachusetts Legislature. Work began in June 1902, under the direction of New Haven contractor C.W. Blakeley, and engineer Arthur S. Tuttle. The project involved a total of about eighteen street crossings, including four crossings for the spur track to Slade's Ferry Bridge. The New Haven spent about $400,000 to acquire property and easements for the project, which totaled about $2,000,000. About 65 percent was paid by the railroad, with 25 percent paid by the Commonwealth and 10 percent by the City of Fall River. The scope of the project generally consisted of a combination of raising the grade of the tracks and lowering the grade of the cross streets, along a three-mile stretch of track. In some places, this required the raising of abutting buildings, new foundations, drainage work, and construction of retaining walls, mostly built of granite obtained from nearby quarries. Among the unique features of the project was the "Davol Street ramp", for street traffic. It consisted of a short iron span over the double tracks at the bottom of Walnut Street, with a sharp 90 degree bend atop a stone and earth embankment positioned parallel to the tracks northward onto Davol Street below. The project also included two new stone arch bridges and embankment at Central Street, over the tracks and Quequechan River, along with a new street-level viaduct over the railway between Central Street and Anawan Street. Construction of the viaduct involved extensive deep foundation work, since the area was located in landfill, near the mouth of the Quequechan River, just north of the Metacomet Mill and the old Iron Works property. The project was officially completed in November, 1905.

1906 view of the "Davol Street Ramp", one of the more unusual features of the Grade Elimination Project. It carried Walnut Street over the tracks with a sharp bend and ramp down to Davol Street.

Ca. 1905 view of extensive retaining wall work near the intersection of Central, Elm and Davol Streets, over the New York, New Haven and Hartford Railroad. The newly completed viaduct over the track provided a connection to Anawan Street. The Metacomet Mill, on the left, is currently the oldest remaining mill in the city. The storehouses of the American Printing Company are on the right (toured by SNEC in 2013). The gasometer of the Fall River Gas Company no longer exists.

Right: view of the granite retaining wall near Central Street in Fall River, looking north. 2010 photo by Marc N. Belanger.

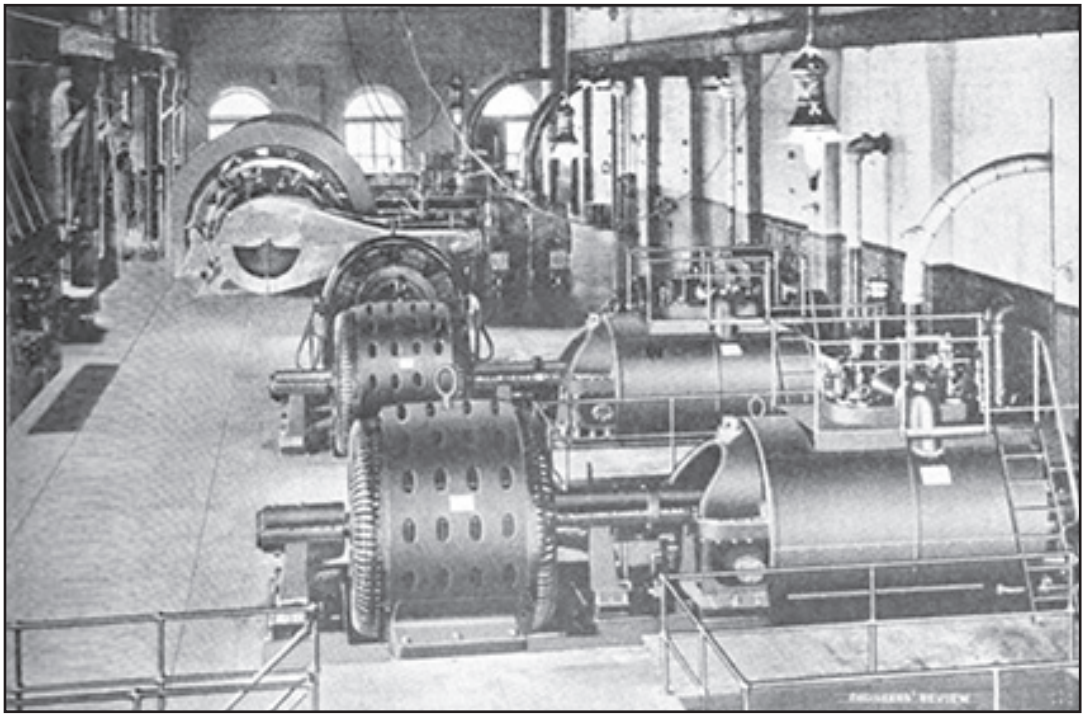
Electrification of the Providence, Warren and Fall River Branch

The first practical electric street railway in the United States opened in Richmond, Virginia, in 1888. By the mid-1890s, there were over 900 street railway systems operating over 11,000 miles of track in the nation. Spurred on by ever-increasing competition from the trolley operators, who had been expanding into the realm of inter-urban service, the New York, New Haven and Hartford converted its Nantasket Beach Branch in Hull, Massachusetts, from steam to electric, as an experiment in 1895. This conversion proved to be immediately successful, and the New Haven soon converted some of its other short lines, including the Berlin Branch in Connecticut. The electric trains proved to be much more efficient than steam for short runs with multiple stops. With these early experiments, the New Haven gained valuable experience operating with electric, that would pave the way for the landmark 1907 AC conversion of its main line between Stamford, Connecticut, and Woodlawn, New York. In between this period, in 1902, the company converted the main line from Providence to Fall River, via Warren, as well as the section between Warren and Bristol, Rhode Island. The line initially operated with a temporary power system until a new plant was opened in Warren, just north of the junction of the line to Bristol.

A highly detailed description of line's initial components can be found in the March 1902 edition of Street Railway Journal, available for viewing on Google Books. The direct current (DC) plant contained two 850-kW, 625-volt General Electric generators powered by two cross-compound condensing Greene engines built by the Providence Engineering Company. The adjoining boiler house consisted of ten 200-hp Bridgeport return-tubular boilers. The overhead

A Brill combination passenger and baggage car used by the New York, New Haven and Hartford Railroad on the Providence to Fall River route, from Street Railway Journal, *March 1902.*

trolley-type power system also included two battery houses, one located in East Providence near the northern end, and the other located at Brayton station, just west of the Slade's Ferry Bridge in Somerset. Each battery house contained 800-ampere-hours capacity supplied by 250 G-11 cells made by the Electric Storage Battery Company of Philadelphia. The system also included a car house located near the power station in Warren, with a repair shop that included a transfer table made by Taunton Locomotive Works. Rolling stock initially consisted of forty-six cars furnished by J.G. Brill of Philadelphia and Osgood Bradley Car Works of Worcester. All cars were furnished with Brill trucks. Four G.E. type 51 motors rated at 80-hp powered each unit. The cars were comprised of a mix of passenger coaches, operated as trailers, and combination passenger-baggage cars. The line also ran several freight-only cars and a few others for specialty purposes. Trains on the line were typically operated in a double or single-car format. The seats in the passenger cars were made by Heywood Brothers of Wakefield, Massachusetts.



View of the interior of the Warren Power Station, from Street Railway Journal, *March 1902.*

The electrified Providence to Fall River line proved to be quite successful (profitable) for the New Haven Railroad. The line initially operated about 112 trains per day between the two cities. During the summer months, passengers flocked to seaside destinations along the route, including Crescent Park in Riverside, East Providence and to summer communities such as Ocean Grove in Swansea. At times, additional cars had to be borrowed from the Nantasket Beach Branch to accommodate the peak seasonal demands.

Epilogue

In 1908, the Brightman Street Bridge opened between Fall River and Somerset, just north of the Slade's Ferry Bridge, providing a new roadway connection to Providence, over what later became U.S. Route 6. By the 1920s, both the New Haven Railroad its competitor street railways saw a sharp decline in revenue between Fall River and Providence.

The electric trains of the Providence, Warren and Fall River Branch operated until 1932, when the Slade's Ferry Bridge was destroyed by a tanker ship collision. After this event, bus service between Fall River and Providence was provided by the New England Transportation Company, owned by the New Haven Railroad. During this time, government officials and the New Haven deliberated whether or not to rebuild the Slade's Ferry Bridge. In 1938, it was decided that the bridge would be rebuilt with a single deck, for vehicular traffic only. A new 600-ton bascule span was installed, operated with a 340-ton concrete counterweight. The New Haven Railroad agreed to pay for a portion of the reconstruction, with the understanding that it would thereafter have no further obligations to operate or maintain the bridge. In 1943, the New Haven demolished and scrapped the four steel bridges that once carried the Providence, Warren and Fall River Branch over the streets of Fall River, netting 500 tons of steel for the war effort.

The Slade's Ferry Bridge was closed to vehicular and pedestrian traffic in January 1970, a few years after the opening of the Braga Bridge and Interstate 195, further to the south. It was demolished soon after.

Today, the two main piers of the bridge are still visible, along with the partial remains of the brick battery house in Somerset. Several abutments remain along the Warren to Somerset route. In Warren, remnants of the power plant also exist, adjacent to the East Bay Bike Path near Brown Street.

The Davol Street Ramp was removed prior to the construction of the Route 79 highway viaduct in the 1960s. However, many other portions of the Grade Elimination Project still exist, although several of the bridges have been replaced. The 1892 Fall River Station was demolished in the 1950s, shortly after passenger service ceased. Portions of the platforms along the tracks remain. CSX currently operates freight service over this line to the State Pier via Myricks Junction, and the planned MBTA "Southcoast Rail" project is proposed to provide passenger service from Boston in the future.

Marc N. Belanger
Taunton, Mass.

Adapted from a March 21, 2012 presentation given by George Petrin of the Fall River History Club.

Other Sources:

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Efficient Railway Operation, Henry Stevens Haines, The Macmillan Company, 1919, page 24-25.

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Massachusetts Metropolitan Water Works Historic Image Collection Now Available Online

The Massachusetts Department of Conservation and Recreation (DCR), the Massachusetts Water Resources Authority (MWRA), and the Massachusetts State Archives recently announced that their historic collection of 8,800 photographic images that document the Massachusetts Metropolitan Water Works (MWW) System between 1895 and 1926 have been posted to the Digital Commonwealth web portal: www.digitalcommonwealth.org

The MWW photographs document the real estate takings for and construction and operations of the Wachusett Reservoir, Wachusett Dam, Wachusett Aqueduct, Sudbury Reservoir, Sudbury Dam, Weston Aqueduct, Weston Reservoir, and the expansion of a water supply distribution system throughout metropolitan Boston (pipe lines, pumping stations, reservoirs, standpipes). The images of real estate takings include residential homes and buildings; businesses; mills; town buildings; schools; churches; cemeteries; and railroad

stations. About 50 Massachusetts cities, towns, and Boston neighborhood districts are represented in this collection. These images represent the Metropolitan Water Works System prior to the 1926-1940 expansion of the system that included the construction of the Quabbin Reservoir, and mostly derive from 7,839 glass plate photographic negatives that survive today.

Additionally, the photograph collection includes photographic images of Boston Water Works facilities between 1876 and 1895, before they were taken over by the Commonwealth in 1898.

This collection includes the photographic documentation of the Boston Water Board's construction between 1890 and 1895, representing the Hopkinton Reservoir and Dam, and Sudbury Reservoir and Dam. Additional major facilities in this collection include water supply and distribution reservoirs of Ashland Reservoir, Ashland Dam, Bear Hill Reservoir, Bellevue Reservoir (standpipe), Chestnut Hill Reservoir, Fells Reservoir, Forbes Hill Reservoir (standpipe), Framingham Reservoirs, Framingham Dams, Lake Cochituate, and Spot Pond; and the water supply aqueducts of Cochituate Aqueduct and Sudbury Aqueduct. Pumping stations represented in this collection include the Arlington Pumping Station, Chestnut Hill Pumping Stations, Hyde Park Pumping Station, and Spot Pond Pumping Station; and pumping engines within these facilities. Other documented facilities include Upper Mystic Lake, Mystic Reservoir, Mystic Pumping Station, Waban Hill Reservoir, Chelsea Reservoir, pipe yards; and gatehouses associated with all MWW facilities.

This project is a collaborative inter-agency effort by DCR, MWRA and the Massachusetts State Archives. Free digital imaging of the collection was made by the Boston Public Library Digital Services, through its partnership with "Digital Commonwealth", and funded by federal and state grants, including Institute of Museum and Library Services / Library Services and Technology Act (LSTA) federal funds through the Massachusetts Board of Library of Commissioners.

An expanded Metropolitan Water Works continues to operate under the joint stewardship of the MWRA (water distribution system) and DCR (water supply reservoirs and their watershed management). DCR and MWRA share a common lineage and heritage back to the Metropolitan Water Works System that was established by the Massachusetts legislature in 1895. DCR and MWRA partnered with the Massachusetts State Archives to ensure that the original photographic negatives and prints of this archival collection are safely preserved for the Commonwealth at the Massachusetts Archives.

The high-quality images can be viewed and downloaded at: https://www.digitalcommonwealth.org/collections/commonwealth:g732dh56k

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Membership Applications to the Northern and Southern New England Chapters of the Society for Industrial Archeology

(Please note that membership applications with more complete detail may be found online at nec-sia.org)

The Society for Industrial Archeology promotes the identification, interpretation, preservation, and modern utilization of historic industrial and engineering sites, structures and equipment.

Northern New England Chapter (ME, NH, VT) Membership and Dues for 2015

Member Renewal: $20.00
Student: $10.00
New Member: $15.00

Complete and return this with your check made payable to NNEC-SIA and Send to:
Rick Coughlin, Treasurer NNEC-SIA,
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Regular: $10.00
Student: $8.00
Lifetime: $150.00
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Jamaica Plain, MA 02130-3143

Name: _____

Occupation:_____

Address:_____

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Phone: _____Email: _____